

Bunker Hill
 AMD Mitigation Concepts
 4.1: Plug Small Hopes (SH) Drift
 Order of Magnitude Cost Opinion

DATE: 06/13/2000
 PROJECT NO.: 152215.FS.02
 ESTIMATE BY: D. Hedglin

DESCRIPTION	QTY	UNIT	TOTAL UNIT COST	TOTAL COST	COMMENTS
Plug Shaft					
Survey to Determine Location of SH Drift	1	LS	1,600.00	\$1,600	
Install New Access Shaft to SH Drift	1	LS	10,000.00	\$10,000	
Clean Out SH Drift & Find 2-Raises to Level 5	1	LS	51,690.24	\$51,690	
Clean Out Min. of 16 Feet of Shafts to 5 Level	1	LS	10,338.05	\$10,338	
Prepare for Plug	2	EA	5,319.96	\$10,640	
Concrete Plug	60	CY	272.30	\$16,338	
Construct Bulkhead Each End of SH Drift	2	EA	3,398.96	\$6,798	400bf each @ 1.50/bf * 8hrs to install
Transport Mix to Pump Site	400	CY	3.29	\$1,315	
Fill all Bulkheaded Areas w/Sand/Cement	400	CY	83.05	\$33,222	add for mixing as in Cherry, etc
Remove/Backfill Access Shaft	1	LS	2,659.98	\$2,660	
Replace Culvert Under Road	1	LS	3,546.02	\$3,546	
SUBTOTAL				\$148,147	
MISC ALLOWANCE	10%			\$14,815	
SUBTOTAL				\$162,962	
CONTINGENCY	50%			\$81,481	
SUBTOTAL				\$244,443	
MOBILIZATION	15%			\$36,666	
CONSTRUCTION TOTAL				\$281,109	
SALES TAX ON MATERIALS	5.0%			\$1,365	
ENGINEERING AND SUPPORT	20%			\$56,222	
CONST MANAGEMENT	8%			\$22,489	
CAPITAL TOTAL (ROUNDED)				\$360,000	
ANNUAL O&M COST			\$500		
NPV OF ANNUAL O&M COSTS (30 YEARS @ 7% INTEREST)				\$6,000	
TOTAL 30-YEAR PRESENT WORTH COST @ 7% INTEREST				\$366,000	

NOTES:

Misc Allowance markup is to include items known to exist but cannot be quantified at this time.

Contingency is for scope changes that are presently unforeseen.

Mobilization includes bonds, insurance, temporary facilities, health & safety, demobilization, etc.